

IN THE CLAIMS

1. (Currently Amended) A system for receiving broadcast satellite transmissions in one of an air-based, a land-based, and a sea-based vehicle, said system comprising:

an orientation system for determining at least a first orientation of the vehicle in three dimensions;

a controller in communication with said orientation system, said controller adapted to receive first orientation data corresponding to said first orientation of the vehicle and to receive first location data corresponding to a first location of the vehicle relative to a predetermined positioning system, wherein said controller utilizes said first orientation data and said first location data to determine first position control data;

a one dimensionally electronically-pointable antenna mounted upon a motorized turntable to provide two-dimensional pointing and adapted to receive said first position control data from said controller, wherein said one-dimensionally electronically-pointable antenna is pointable in two-dimensions in open-loop operation in accordance with said first position control data to receive a first direct broadcast satellite signal from a first satellite having a known location relative to said predetermined positioning system; and

a direct broadcast satellite receiver adapted to process a first radio frequency signal corresponding to said first direct broadcast satellite signal received by said electronically-pointable antenna to produce at least one of the first audio output, a first video output, and a first data output;

a closed-loop feedback system adapted to provide at least one output signal wherein said one dimensionally electronically pointable antenna is pointable in two-dimensions utilizing said

at least one output signal in closed-loop operation to receive said first direct broadcast satellite signal; and,

a signal lock for automatically activating and deactivating said closed-loop feedback system in response to said first direct broadcast satellite signal received by said one dimensionally electronically-pointable antenna, wherein said system is in open-loop operation when said closed-loop feedback system is deactivated and in closed-loop operation when said closed-loop feedback system is activated.

2. (Currently Amended) A system as claimed in Claim 1, wherein said one dimensionally electronically-pointable antenna and said turntable are substantially flat.
~~comprises a one dimensionally electronically pointable antenna, said system further comprising:~~

a1 cont.
~~a turntable system upon which said one dimensionally electronically pointable antenna is mountable to provide two dimensional pointing.~~

3. (Currently Amended) A system, as claimed in Claim 2, wherein said at least one output signal controls ~~controller comprises a feedback loop for controlling~~ a rotational orientation of said one-dimensionally electronically-pointable antenna on said turntable.

4. (Currently Amended) A system, as claimed in Claim 1, wherein said one dimensionally electronically-pointable antenna comprises one of a phased array antenna and a plasma grating antenna.

5. (Currently Amended) A system, as claimed in Claim 1, wherein said one dimensionally electronically-pointable antenna is substantially flat within a plane and is adapted to electronically point in a first and a second dimension at a look angle relative to said plane.

6. (Original) A direct broadcast satellite system, as claimed in Claim 1, wherein said orientation system comprises a first electronic compass and tilt-sensor.

7. (Original) A direct broadcast satellite system, as claimed in Claim 1, wherein said orientation system comprises a first solid-state electromagnetic field sensor and a first fluid-field tilt-sensor adapted to provide said first orientation data of the vehicle.

8. (Currently Amended) A direct broadcast satellite system, as claimed in Claim 1, wherein said controller comprises an open-loop control system adapted to process said first location data, said first location data received from a Global Positioning System receiver in communication with said controller, said first orientation data from said controller, and position and signal characteristic data corresponding to a first satellite to determine said first position control data comprising at least a first coarse look-angle position data to point said one dimensionally electronically-pointable antenna ~~in first and second dimensions at said satellite~~.

9. (Currently Amended) A direct broadcast satellite system, as claimed in Claim 8, ~~wherein said system further comprising a signal lock detector~~ is adapted for at least detecting a first loss of said first direct broadcast satellite signal to activate said open-loop operation.

10. (Currently Amended) A direct broadcast satellite system, as claimed in Claim 9, wherein said ~~controller further comprises a closed-loop feedback circuit system~~ is adapted for controlling steering of a rotational orientation of said turntable and a look-angle of said electronically-pointable antenna.

11. (Currently Amended) A direct broadcast satellite system for receiving in a mobile craft a first signal from a first direct broadcast satellite having a known location relative to a predetermined positioning system, said system comprising:

an orientation system for determining at least a first orientation of the mobile craft in three dimensions;

a processor, in communication with said orientation system, for determining first position control data from at least first orientation data corresponding to said first orientation of the mobile craft and from first location data corresponding to a first location of the mobile craft relative to said predetermined positioning system, wherein said processor is adapted to receive a first input from a user, said first input corresponding to a selection of the first direct broadcast satellite; and

an electronically-pointable antenna, in communication with said processor, adapted to be pointed at the first direct broadcast satellite in accordance with said first position control data, wherein the first signal from the first direct broadcast satellite is receivable by said electronically-pointable antenna.

12. (Currently Amended) A direct broadcast satellite system as claimed in Claim 1311, ~~wherein said processor is adapted to receive a first input from a user, said first input corresponding to selection of the first direct broadcast satellite.~~ further comprising:

an open-loop control system adapted to process said first location data, said first location data received from a Global Positioning System receiver in communication with said controller, said first orientation data from said controller, and position and signal characteristic data corresponding to a first satellite to determine said first position control data comprising at least a first coarse look-angle position data to point said one dimensionally electronically-pointable antenna;

a closed-loop feedback system adapted to provide at least one output signal in response to said first direct broadcast satellite signal received by said one dimensionally electronically-pointable antenna, wherein said one dimensionally electronically pointable antenna is pointable in two dimensions utilizing said at least one output signal in closed-loop operation to receive said first direct broadcast satellite signal; and,

a signal lock for automatically activating and deactivating said closed-loop feedback system in response to said first direct broadcast satellite signal received by said one-dimensionally electronically-pointable antenna, wherein said system is in open-loop operation when said closed-loop feedback system is deactivated and in closed-loop operation when said closed-loop feedback system is activated.

al
cont.
13. (Currently Amended) A direct broadcast satellite system as claimed in Claim ~~1311~~, wherein said orientation system is adapted to determine a first true north orientation of the mobile craft from first magnetic north data, wherein said first true north orientation is used in determining said first orientation of said mobile craft.

14. (Currently Amended) A direct broadcast satellite system as claimed in Claim ~~1311~~, wherein said processor includes a first memory for storing at least a first orbit position of the first direct broadcast satellite, wherein said first orbit position is used by said processor to determine said first position control data.

15. (Currently Amended) A direct broadcast satellite system as claimed in Claim ~~1311~~, further comprising a Global Positioning System receiver in communication with said processor for receiving at least first location information of the mobile craft, wherein said processor uses said first location information to determine said first position control data.

16. (Currently Amended) A direct broadcast satellite system as claimed in Claim ~~1311~~, further comprising a direct broadcast receiver for processing a first radio frequency signal corresponding to said first direct broadcast satellite signal received by said electronically-pointable antenna to produce at least one of the first audio output, a first video output, and a first data output.
